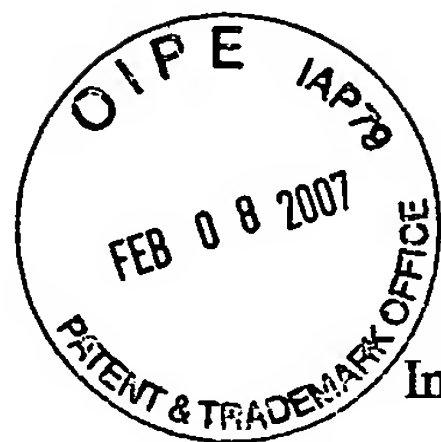


**BEST AVAILABLE COPY****IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of:

§

**OFFICIAL**

TRAN M. NGUYEN, et al.

§

Serial No.: 10/649,921

§

Filed: August 27, 2003

§

Group Art Unit: 1764

For: ADDITIVES TO ENHANCE

§

Confirmation No. 6081

METAL AND AMINE REMOVAL §

Examiner: JOHN C. DOUGLAS

IN REFINERY DESALTING

§

Docket No.: 194-29741-US

PROCESSES

§

DECLARATION UNDER 37 CFR §1.132

Mail Stop Amendment

Assistant Commissioner for Patents

P.O. Box 1450

Alexandria, Virginia 22313-1450

Sir:

In connection with the enclosed Amendment to the above-cited case, please enter the following Declaration in support thereof.

I, TRAN M. NGUYEN, hereby declare that I am a joint inventor of the methods of transferring metals and/or amines from a hydrocarbon phase to a water phase in a refinery desalting process, the compositions for transferring metals and/or amines from a hydrocarbon phase to a water phase, and the hydrocarbon crude oil emulsions so treated that are the subject of the above-noted patent application;

I hereby certify that this correspondence, and any attachments referred to, is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450, on

FEBRUARY 6, 2007

Date of Deposit

David L. Mossman

David L. Mossman

2.6.2007

Date

That in 1981 I earned a Bachelors of Science in Chemistry from the University of Texas at Austin, Texas;

That from 1984 to 1990 I was a Technical Representative Oil Treating Specialist in Sand Springs, Oklahoma at Chemlink Petroleum Inc.;

That from 1990 to the present I have been employed at the Baker Petrolite Division of Baker Hughes Incorporated in Sugar Land, Texas as a Research Associate in Industrial Technology;

That I am the sole or co-author of four articles or publications;

That while I have been employed at Baker Petrolite I have been engaged in research and development of chemicals related to removing metals and/or amines in refinery desalters;

That I am familiar with the Office Action dated December 8, 2006 in the subject patent application, including the Examiner's rejection of the claims under 35 U.S.C. §103(a) over U.S. Pat. No. 5,080,779 to Awbrey, et al. in view of U.S. Pat. No. 4,938,876 to Ohsol for reasons of obviousness;

That the Examiner has contended that Awbrey, et al. discloses a method of adding a chelating agent to water and adding the water mixture to crude oil, when in fact Awbrey, et al. teaches that the "chelant should be fed directly to the crude" (column 2, line 42 therein), which is not the claimed method herein;

That I have caused to be performed Sample Nos. 170117-001 and 170117-002, described below;

Sample # 170117-001

This experiment injected 18 ppm-v of *glycolic acid to crude oil* (94%). Subsequently the crude oil and wash water (6%) were mixed and homogenized by blending prior to entry into each of the test cells. Samples were placed into a heated cell in the EDDA (described in the patent application). The temperature in the simulator was maintained at 212°F. After preheating, chemical additives were injected at varying dosages. The samples were then capped and agitated 100 times manually and then replaced into the cells. Voltage was then applied at 1,500 volts at 5 minute intervals for

15 minutes. After each 5 minute interval, the water coalesced volume (or water drop) was measured in milliliter in each tube and recorded. Once the reading had been recorded, the tube was replaced into the cell and voltage was applied for 5 minutes. This cycle was repeated until a cumulative charge of 15 minutes had been achieved.

Relative chemical demulsifier performance was determined by the speed and amount of the water released based upon 100 ml of blended sample and by the sharpness of the water and oil interface.

After completion of the EDDA test, a syringe fitted with a long cannular needle was used to abstract 10 mL of desalted crude from the EDDA test tube at the level of the 75 mL mark. This 10 mL aliquot was submitted to analytical (Core Laboratories) for ICP analysis for iron. The Analytical Report is attached hereto.

#### Sample # 170117-002

This experiment injected 18 ppm-v of *glycolic acid into the wash water* (6%). Subsequently the wash water and the crude oil (94%) were mixed and homogenized by blending prior to entry into each of the test cells. Samples were placed into a heated cell in the EDDA. The temperature in the simulator was maintained at 212°F. After preheating, chemical additives were injected at varying dosages. The samples were then capped and agitated 100 times manually and then replaced into the cells. Voltage was then applied at 1,500 volts at 5 minute intervals for 15 minutes. After each 5 minute interval, the water coalesced volume (or water drop) was measured in milliliter in each tube and recorded. Once the reading had been recorded, the tube was replaced into the cell and voltage is applied for 5 minutes. This cycle was repeated until a cumulative charge of 15 minutes had been achieved.

Relative chemical demulsifier performance was determined by the speed and amount of the water released based upon 100 ml of blended sample and by the sharpness of the water and oil interface.

After completion of the EDDA test, a syringe fitted with a long cannular needle was used to abstract 10 mL of desalted crude from the EDDA test tube at the level of the

75 mL mark. This 10 mL aliquot was submitted to analytical (Core Laboratories) for ICP analysis for iron. This result is also presented on the attached Analytical Report.

Further, I hereby declare:

That as shown in the attached Core Laboratories report of January 12, 2007, the iron from Sample # 170117-001 where the glycolic acid was added into the crude oil was 3.58 mg/kg, as contrasted with the iron from Sample # 170117-002 where the glycolic acid was added into the wash water which was 1.72 mg/kg; less than half that of Sample # 170117-001;

That I conclude that where the glycol acid was added in the method made a significant difference in how much iron was removed.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application cited above or any patent issued thereon.

Further Declarant sayeth not.

Signature of Declarant: \_\_\_\_\_

  
TRAN M. NGUYEN

Date: \_\_\_\_\_

February 5, 2007



8210 Mosley Rd.  
Houston, TX 77075  
713 943-9776 Telephone  
713 943-3846 Facsimile

# CORE LABORATORIES



JERRY WEERS  
BAKER PETROLITE  
12645 WEST AIRPORT BLVD.  
SUGAR LAND, TX 77478

Date Reported: 1/12/07  
Date Received: 1/10/07

## Analytical Report

Test	Result	Units	Method	Date	Analyst
Sample Number: 170117-001	Sample ID: BPR27494 @ 18 ppm-v inject to oil phas				Sample Rcvd:
Sample Date: 1/9/07	Description:				1/10/07
Metals By ICP					
Iron	3.58	mg/kg	ASTM D-5708	1/12/07	NJ
Sample Number: 170117-002	Sample ID: BPR27494 @ 18 ppm-v inject to water p				Sample Rcvd:
Sample Date: 1/9/07	Description:				1/10/07
Metals By ICP					
Iron	1.72	mg/kg	ASTM D-5708	1/12/07	NJ

Approved By: \_\_\_\_\_  
William K. Cole

The analytical results, opinions or interpretations contained in this report are based upon information and material supplied by the client for whose exclusive and confidential use this report has been made. The analytical results, opinions or interpretations expressed represent the best judgment of Core Laboratories. Core Laboratories, however, makes no warranty or representation, express or implied, of any type, and expressly disclaims same as to the productivity, proper operations or profitability of any oil, gas, coal, or other mineral, property, well or sand in connection with which such report is used or relied upon for any reason whatsoever. This report shall not be reproduced, in whole or in part, without the written approval of Core Laboratories.